

Title: POINT OF PURCHASE DISPLAY

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## POINT OF PURCHASE DISPLAY

### Field of the Invention

This invention relates to improved methods and apparatus concerning point of purchase displays.

### Background of the Invention

Various techniques are known for providing point of purchase displays.

### Summary of the Invention

The present invention in one or more embodiments includes an apparatus and a method of producing a point of purchase display. The method includes producing the point of purchase display by a new injection molding technique.

In one embodiment of the present invention an apparatus is provided including a first U-shaped member comprised of an outer portion and an inner portion wherein the outer portion and the inner portion are substantially parallel to each other and the outer portion has a first slot. A second similar U-shaped member may be provided comprised of an outer portion and an inner portion wherein the outer portion and the inner portion are substantially parallel; and the outer portion has a second slot. A pegboard may be attached to the inner portion of the first U-shaped member and the inner portion of the second U-shaped member.

The outer portions of the first and/or second U-shaped members may have a plurality of further slots. The apparatus may include a top member having a first end connected to the first U-shaped member and a second end connected to the second U-shaped member. The top

member may have an edge and there may be one or more slots located through the edge. A bottom member may also be provided, having a first end connected to the first U-shaped member and a second end connected to the second U-shaped member. The apparatus may include a wire fixture on which the first and second U-shaped members may be hung. The wire fixture may be comprised of a plurality of U-shaped brackets.

The first and second U-shaped members may enclose first and second gaps. Each of the plurality of U-shaped brackets may have a first portion, a second portion, and a third portion which are connected together. The first portion and the third portion may be substantially parallel to each other and substantially perpendicular to the second portion. The first portion and the third portion of the plurality of U-shaped brackets can fit within the first and second gaps, respectively, of the first and second U-shaped brackets.

The present invention in one embodiment may be comprised of a method comprising the steps of using a molding process to form a first U-shaped member comprised of an outer portion and an inner portion wherein the outer portion and the inner portion are substantially parallel and the outer portion has a first slot. The method may also be comprised of using a molding process to form a similar second U-shaped member, to form a pegboard hole matrix, bottom member and top member. The first U-shaped member, second U-shaped member, bottom member, and top member may be formed by molding an integral single unit.

The utilization of a production method in accordance with an embodiment of the present invention allows a significant freedom of the architecture of the polymer employed. I.E. "T-Walls" for spacers and structural reinforcement (see 80 on Fig. 1B) and "shut-Offs" for any holes or openings desired (see 40 & 15a on Fig. 1A) both not possible with the previously employed production method of vacuum forming.

### Brief Description of the Drawings

Fig. 1A shows a perspective view, which includes at least a portion of the front side of an apparatus in accordance with an embodiment of the present invention;

Fig. 1B shows a perspective view which includes at least a portion of the back side of the apparatus of Fig. 1A;

Fig. 2 shows a cross sectional view of the apparatus of Fig. 1A;

Fig. 3 shows a front view of the apparatus of Fig. 1A;

Fig. 4 shows a back view of the apparatus of Fig. 1A;

Fig. 5 shows a perspective view of a wire fixture known in the prior art; and

Fig. 6 shows a perspective view of the apparatus of Fig. 1A hung on the wire fixture of Fig.

5.

### Detailed Description of the Drawings

Fig. 1A shows a perspective view, which includes at least a portion of the front side of an apparatus 10 in accordance with an embodiment of the present invention. Fig. 1B shows a perspective view which includes at least a portion of the back side of the apparatus 10. Fig. 2 shows a cross sectional view of the apparatus 10 taken along a line AB. Fig. 3 shows a front view of the apparatus 10. Fig. 4 shows a back view of the apparatus 10.

The apparatus 10, which may be called a power wing or power wing display may be used for displaying retail items in a store. The apparatus 10 may be comprised of a top member 12, side members 14 and 16, and a bottom member 18. The apparatus 10 may also be comprised of perforated board 20 which is attached to the members 12, 14, 16, and 18 as shown by Figs. 1A and 1B. The perforated board 20 may be comprised of a plurality of holes such as hole 20a. The

perforated board may have a front surface 21a shown in Fig. 1A and a rear surface 21b shown in Fig. 1B.

The top member 12 is fixed to the side members 14 and 16. Referring to Fig. 2, each of the side members, 14 and 16 have a U-shape with a spaces, openings, or gaps 34 and 36, respectively. The side member 14 is comprised of outer portion 14a, edge portion 14b, and inner portion 14c. The gap 34 is between the outer surface 14a and the inner surface 14c. The side member 16 is comprised of outer surface or portion 16a, edge portion 16b, and inner portion 16c. The gap 36 is between the outer portion 16a and the inner portion 16c. The bottom member 18 is fixed to the side members 14 and 16. The perforated board 20 may be attached to the members 12, 14, 16, and 18 by virtue of an number of molding processes including injection molding.

The top member 12 is also U-shaped and includes an outer portion 12a, an edge 12b, and an inner portion 12c. There is a gap 32 between the outer portion 12a and the inner portion 12c. The edge 12b has openings or slots 40, 42, 44, 46, and 48. The slots 40, 42, 44, 46, and 48 are used to attach graphic panels and product glourifiers. The slots 40, 42, 44, 46, and 48 are created automatically as a result of shut-offs where the two mold halves meet to also strengthen the mold components from warping and bowing under the pressures of the molding process.

The top member 12 also has slots 90 and 92 shown in Fig. 1A. Slot 90 has an open end 90b and a closed end 90a. Slot 92 has an open end 92b and a closed end 92a.

The side members 14 and 16 are mirror images of each other and therefore only side member 14 needs to be described in further detail. Side member 14 includes "Side Burn Slots" or openings 15a, 15b, and 15c. Slot 15a may have a width of five and three eighths inches, slot 15b may have a width of six inches, and slot 15c may have a width of six and five sixteenths inches. The member 14 typically increases in width from a portion near the top member 12 to a portion

near the bottom member 18. This being purely an aesthetic detail that has no bearing on the performance of this concept, however a modification to the shape will effect the size of the "Side Burn Slots". Slot 15c is typically wider than slot 15b, which is typically larger than slot 15a. The slots 15a, 15b, and 15c, each typically have a height of H1 which may be one inch. The slots 15a, 15b, and 15c lead into the gap 34, so that an object can be inserted through any of the slots 15a, 15b, and 15c, into the gap 34. The member 16 typically has slots 17a, 17b, and 17c, analogous to slots 15a, 15b, and 15c, located through outer portion 16a as shown in Fig. 1B. An object can be inserted into any of the slots of the member 16 and into the gap 36.

The side burn slots 15a, 15b, 15c, and analogous slots 17a, 17b, and 17c in outer portion 16a, may be created by an injection molding process with the shut off technique and are used to hold additional product glorifiers merchandisers and or graphics.

The apparatus 10 further includes portion 50 which has holes 50a and 50b and portion 52 which has holes 52a and 52b. The purpose of portions 50 and 52 is to make available an area onto which an adaptor can be mechanically fastened to attach apparatus 10 to a new fixture not yet prior art. The portions 50 and 52 appear as indentations in the front view of Fig. 3 but appear as protrusions in the perspective view of Fig. 1B and in the back view of Fig. 4. The apparatus 10 further includes portions 60 and 62 which allow for any stock components to be employed in the attachment of apparatus 10 to fixture 100 or a multitude of other fixtures. The portions 60 and 62 appear as indentations in the front view of Fig. 3 but as protrusions in the perspective view of Fig. 1B and in the back view of Fig. 4. The portion 60 includes portions 60a, 60b, and 60c which are "T" walls and serve to reinforce the load bearing capabilities of portions 60 and 62. The portion 62 includes portions 62a, 62b, and 62c which are "T" walls and serve to reinforce the load bearing capabilities of portions 60 and 62. The apparatus 10 also includes a plurality of rectangular protrusions 80, such as 80a, shown in Fig. 4, which increase the wall thickness of portion 20 up to

a common thickness, needed for most conventional peg hooks to hang without dropping downward. Also, portions 80 and 80a are "T" walls that serve to strengthen portion 20 from weight related deflection; under the load of the hooked product; such as a "D" sized batteries.

The length, L1 shown in Fig. 3, of the apparatus 10 may be two to four feet in length. The apparatus 10 can be removed from a shipping box and simply hung over the wire fixture in the store. The production method employed allows for a completely assembled unit to be created from one part. Unlike the prior art, this concept simply allows for an unparalleled modification of the chosen environment, with the most simplistic utilization endeavor and the most cost effective or efficient method of production.

Fig. 5 shows a perspective view of a wire fixture 100 known in the prior art. The wire fixture 100 includes metal column rods 104, 106, 108, 110, and 112. The wire fixture 100 also includes a plurality of U-shaped brackets such as U-shaped bracket 102, each of which is connected, such as by welding to metal column rods 104, 106, 108, 110, and 112. U-shaped bracket 102 includes a portion 102a which is perpendicular to and integral with and/or connected to portions 102b and 102c. The other U-shaped brackets may be identical to U-shaped bracket 102 and may include U-shaped brackets 132, 134, and 136. The wire fixture 100 may be attached by welding, or hung on or mechanically attached onto, or attached in any other manner to upright metal poles or columns 120 and 122. The metal poles or columns 120 and 122 may be attached at one end to a metal base 12. It should also be known that wire fixture 100 can also be made from other materials other than wire and can be attached to a multitude of locations at the retail environment; not only pole stands. Also apparatus 10 can be employed in many of these additional environments.

Fig. 6 shows a perspective view of the apparatus 10 of Figs. 1A-4 hung on the wire fixture 100 of Fig. 5. The portions of the U-shaped brackets of the wire fixture 100, such as

portions 102c and portions of other U-shaped brackets similar to portion 102c are inserted into the gap 34 between the portions 14a and 14c of the U-shaped member 14. The portions of the U-shaped brackets of the wire fixture 100, such as portions 102b and portions of other U-shaped brackets similar to portion 102b are inserted into the gap 36 between the portions 16a and 16c of the apparatus 100. The apparatus 100 rests on the wire fixture 100, so that an inner surface of the portion 12a of the member 12 rests on the U-shaped bracket 102. One or more U-shaped brackets can be seen through the slots 15a, 15b, and 15c, as shown by Fig. 6 and would be able to be seen through the analogous slots in portion 16a. For example, bracket 132 can be seen through slot 15a, bracket 134 can be seen through slot 15b, and bracket 136 can be seen through slot 15c.

The apparatus 10 may be made as a single piece unit by injection molding. An injection molding production method can be used which employs molten polymer forced, with tons of pressure, into a metal mold. This mold may be comprised of two halves that when put together create a cavity of the same design as the part. It is into this cavity that the molten polymer (plastic) is forced in while hot and then cooled into a ridged form. This part is then ejected from the two mold halves once they are opened up. A design technique called "Draft" (prior art) can be utilized to ensure that the part can, indeed, be ejected from the mold, intact.

"Injection Molding," allows for a "T-Wall" feature to be incorporated into this design for free, with no labor required for its assembly. The "T-Wall" offers reinforcements to any points of contact with store related objects; such as wire fixtures, such as fixture 100. (see portions 80, 80a, 62, 62a, 62b, 60, 60a, and 60b). This is a positive feature when holding all of weight in this apparatus 10; without the need for an extra metal bracket.

"Injection Molding" also allows for "Shut-Offs." This feature is where the two mold halves touch, therefore shutting off the flow of the molten polymer in a desired area. This allows for all



the, hundreds, of peg wire holes, such as hole 20a in the pegboard-like portion 20 to be in the part, i.e. apparatus 10 prior to being ejected from the open mold halves. "Shut-Offs" also allow for the long thin "Vertical Thru Slots" 72A, 70 and "Speed Slots" 40, 42, 44, 46, and 48 on the edge 12b that can except the "Riser" paper board panel and quick snap-on riser treatments in the future. They also make possible a thinner space between the double walls, i.e. outer portion 12 and inner portion 12c for top member or top overhang 12 on the apparatus 10 while still employing the injection molding production method.

The "side burn slots", such as slots 15a-c and 17a-c are the product of "shut offs" and offer a unique ability to hang more merchandise on the side of the apparatus 10. If desired the slots 15a-c and/or slots 17a-c can be covered by a large graphic panel.

Although the invention has been described by reference to particular illustrative embodiments thereof, many changes and modifications of the invention may become apparent to those skilled in the art without departing from the spirit and scope of the invention. It is therefore intended to include within this patent all such changes and modifications as may reasonably and properly be included within the scope of the present invention's contribution to the art.